



A.D. 1855 N° 44.

S P E C I F I C A T I O N

OF

JOSEPH PLAYER.

FURNACES.

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1855.



A.D. 1855 N^o 44.

Furnaces.

(This Invention did not proceed to the Great Seal.)

PROVISIONAL SPECIFICATION left by Joseph Player at the Office of the Commissioners of Patents, with his Petition, on the 8th January 1855.

I, JOSEPH PLAYER, of No. 2, Winchester Buildings, in the City of London, Civil Engineer, do hereby declare the nature of the said Invention for
5 “IMPROVEMENTS IN THE CONSTRUCTION OF FURNACES FOR THE PREVENTION OF SMOKE”
to be as follows :—

This Invention applies to furnaces of the ordinary construction, having the fire bars and dead plate fixed to the bearers, and is intended to effect a great economy in the quantity of fuel consumed, as well as to improve the com-
10 bustion thereof and prevent smoke; which improvements are principally effected by the use of the following apparatus, by means of which the furnace may be fed or supplied with fuel without opening the doors of the same:—In front of the mouth of the furnace is placed a box-shaped mouth-piece or feeder. This mouth-piece is constructed of sheet iron and lined with fire brick, and is
15 furnished with two doors, one at the front and another at the top thereof. The top of the mouth-piece is formed by a plate of iron projecting over the sides and the front thereof, so as to form (as it were) a platform, on which the supply of fuel is placed. The upper door of the mouth-piece opens inwards, and has a lever connected therewith, by means of which it may be opened and agitated
20 from time to time, as may be required, so as to shake a small quantity of fuel into the mouth-piece in front of the dead plate. The flue of the furnace passes under the bottom of the mouth-piece in order to keep the same always heated; or the same may be kept heated in any other convenient manner. The front

Player's Improvements in Furnaces for the Prevention of Smoke.

door of the mouth-piece or feeder, which is seldom required to be opened, is furnished with three holes. In the upper hole is fitted a piece of talc or thick plate glass, through which the state of the fire may be seen at any time without opening the door, and the supply of fuel regulated accordingly. Through the centre hole passes a short rod, to the inner end of which is attached a plate of 5 iron, by means of which the fuel is to be pushed forward into the furnace, as required. To the outer end of this rod a long rod is connected having a handle at the other end; this rod is so connected as to be capable of being readily disconnected when not required for use. The lower hole is intended to serve for the introduction of an iron rod or poker, for the purpose of stirring 10 the fire when necessary. A supply of fuel is kept constantly on the top of the mouth-piece. By agitating the lever occasionally, the upper door is partially opened, and a small quantity of fuel allowed to fall on to the heated plate at the bottom of the mouth-piece or feeder in front of the dead plate. The fuel having remained a sufficient time upon the heated plate, is then pushed forward 15 on to the fire bars by means of the before-mentioned rod and plate.

It will be evident that by this improved construction of furnace the fire may be fed or supplied with fuel and otherwise regulated without opening the door of the furnace, or admitting air in any way, except that which enters through the fire bars; and by this means both fuel and heat are 20 greatly economized, the combustion is rendered more perfect, and smoke almost entirely prevented.

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1855.